



# in-4711

## PDP-11 ADD-IN SEMICONDUCTOR MEMORY

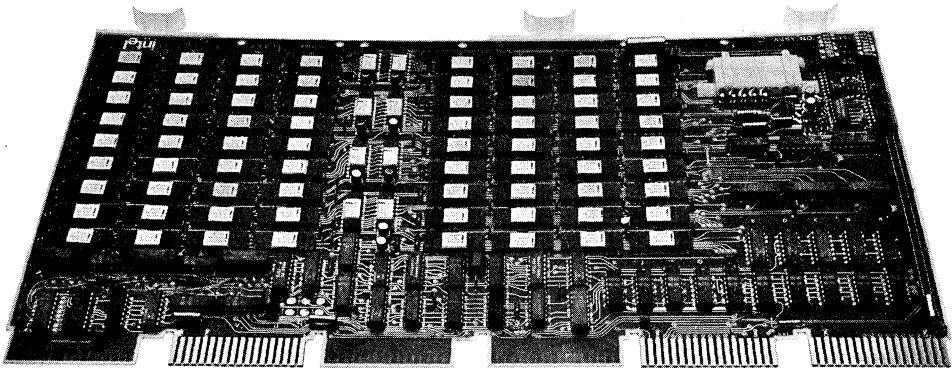
The Intel in-4711 is designed for use in all models and configurations of the DEC PDP-11® computer family able to accommodate a "Hex Height" memory card and its associated options. It utilizes the Intel 2107B 4K dynamic RAM component. The 16K x 16 (18 bit optional) memory and all refresh and control circuitry are contained on a single PC card. Power conversion can be done either with a separate "Quad Height" DC to DC PC regulator card that provides power for up to four in-4711's or with an on-board DC to DC converter for each in-4711-1. The in-4711 and in-4711-1 can be used in a system with 8K core modules, with compatibility with 16K core modules available for volume requirements.

Active power consumption at 30 watts is less than half that of the core memory it replaces. This allows wider operating margin on the power supply as well as a cooler running overall system. The system is 3-5 times more dense than core.

Read and write cycle times of 520 nanoseconds allow significant speed improvement. Interleave operation with two memories is possible for maximum throughput.

Quick address select changes are possible through the use of on-board DIP switches.

Write access time of 150 nanoseconds frees up the unibus at least 50 nanoseconds faster. Byte operation is also standard.



### in-4711 FEATURES:

- Low Cost Memory
- Fast Cycle Time
- Low Power Requirements
- High Reliability
- Module Interchangeability
- Modular Expandability
- Compact Size
- Byte Operation
- Address Select Switches
- Two Way Interleave (16K Boundaries)
- Compatible with both DEC PDP-11® Memory Management and Byte Parity Options

## SPECIFICATIONS

### Capacity:

8K and 16K words per board

### Word Length:

16 or 18 bits

### Cycle Time:

Read	520 nanoseconds
Write	520 nanoseconds

### Access Time:

Read	450 nanoseconds
Write	150 nanoseconds

### Dimensions:

Memory Board (Hex)	15.4 Inches High
	8.4 Inches Deep
	0.375 Inches Wide

### \*DC/DC Converter Board (Quad)

	10.875 Inches High
	0.84 Inches Deep
	0.375 Inches Wide

### Operational Modes:

Read Word  
Write Word  
Read Byte  
Write Byte

\*Converts 8K core voltages to the required in-4711 voltages.

### Interface Characteristics: (Unibus Compatible)

TTL Compatible  
Standard Input Controls:  
Cycle Initiate (MSYN)  
Byte Select (CO)  
Read/Write (CI)  
Address Lines (AO-A17)  
Data Lines (DO-D15)  
Slave Sync (SSYN)  
Initialize (INIT)

### D.C. Power Requirements:

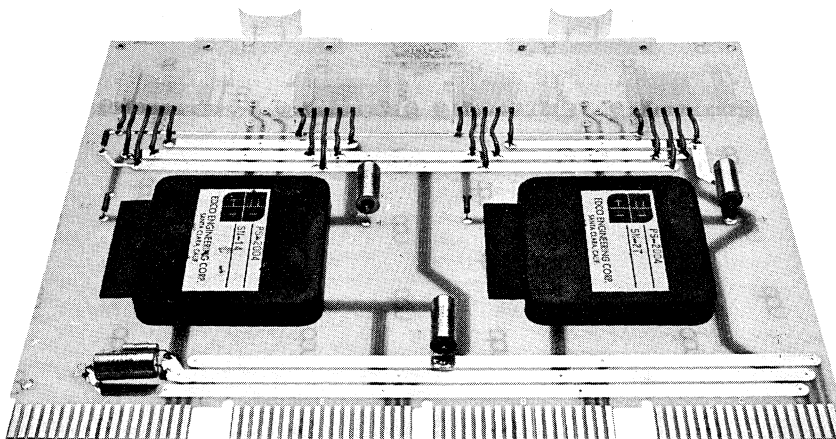
17.5 Watts	Typical
29.4 Watts	Max.

### Environment:

Temperature: 0°C to +50°C operating ambient  
-40°C to +125°C non-operating  
Relative Humidity: Up to 90% with no condensation  
Altitude: 0 to 10,000 feet operating.  
Up to 50,000 feet non-operating.

### Special Options:

16K core compatibility available on a custom basis for volume requirements.



**DC/DC CONVERTER BOARD (R/11)**